



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/694,296

10/28/2003

Takashi Shoji

Q78109

2783

23373 7590 10/01/2008  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

TSANG, ELBERT

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

10/01/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,296	<b>Applicant(s)</b> SHOJI, TAKASHI	
	<b>Examiner</b> ELBERT TSANG	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicant's amendment overcomes the following objection/rejection:
  - a. Objections to claims 1 and 5.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-2, 5-7 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai, Patent No.: US 6,376,857 B1 (hereinafter Imai) in view of Iwakiri et al., Patent No.: US 6,580,525 B1 (hereinafter Iwakiri).**

Re claim 6, Imai teaches an image readout apparatus comprising: a solid state detector comprising: a first conductive layer; at least one photoconductive layer; and a

Art Unit: 2625

second electrode layer having stripe electrodes formed by a plurality of linear electrodes, stacked in the order listed, [fig. 1A, 2A, 3A; col. 2, lines 16-20; col. 10, lines 26-28] which records image data as an electrostatic latent image when irradiated with recording light bearing the image data, and generates electric current corresponding to the electrostatic latent image when scanned with readout light, [col. 2, lines 30-32] with the readout light; a readout light scanning means for scanning the solid state detector with the readout light [col. 3, line 38; col. 4, lines 11-12]; a current detecting means for detecting the electric current output from each of the linear electrodes by the scanning with the readout light; [fig. 1A, 30; col. 7, lines 65-66; col. 9, lines 49-55]; an image signal obtaining means for obtaining an image signal by sampling the detected electric current at a predetermined sampling rate [col. 1, lines. 41-42].

Imai discloses the image readout apparatus. However, Imai does not teach a pixel density changing means for changing a pixel density of an image formed by the image signal, in the longitudinal direction of the linear electrodes, by changing the scanning speed of the readout light and/or the sampling rate. Iwakiri discloses changing pixel density by changing sub-scanning speed and the sampling intervals [col. 3, lines 37-43]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Iwakiri's teaching in the invention of Imai because Iwakiri teaches his invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25; 57-59].

Art Unit: 2625

Re claim 1, the means for conducting the steps of claim 1 correspond to the system elements of claim 6, which would have necessitated the recited means. Thus, the means for conducting steps of claim 1 have been analyzed and rejected in view of claim 6 above.

Re claim 10, Imai discloses the image readout apparatus of claim 6. However Imai does not disclose a readout speed changing means for changing the readout speed of the electrostatic latent image by changing the scanning speed of the readout light scanning means and the sampling rate in proportion with each other. Iwakiri discloses changing the scanning speed and sampling intervals in proportion with each other [col. 19, lines 16-45; i.e. sampling intervals and scan speed are 100  $\mu\text{m}$  and 16 mm/sec, respectively, for standard pixel density. For high pixel density, sampling intervals and scan speed are 50  $\mu\text{m}$  and 8 mm/sec, respectively. For low pixel density, sampling intervals and scan speed are 200  $\mu\text{m}$  and 32 mm/sec, respectively.] Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Iwakiri's teaching in the invention of Imai because Iwakiri teaches his invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25; 57-59].

For claim 7, Imai disclose the image readout apparatus. However, Imai does not disclose a beam width of the readout light, in the longitudinal direction of the linear electrodes, is changed according to the pixel density in the longitudinal direction of the

Art Unit: 2625

linear electrodes. Iwakiri discloses a change in beam diameter [col. 5, lines 50-64; i.e. with a change in pixel density, the beam diameter is changed as well]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Iwakiri's teaching in the invention of Imai because Iwakiri teaches his invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25; 57-59].

For claim 2, the means for conducting the steps of claim 2 correspond to the system elements of claim 7, which would have necessitated the recited means. Thus, the means for conducting steps of claim 2 have been analyzed and rejected in view of claim 7 above.

Re claim 5, Imai discloses the image readout apparatus. However, Imai does not disclose a frequency band of the current detecting means is changed according to a readout speed of the electrostatic latent image, in the case that the readout speed is changed by changing a scanning speed of the readout light and the sampling rate in proportion with each other. Iwakiri discloses scanning speed changes along with sampling intervals (frequency of scan) [col. 19, lines 16-45]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Iwakiri's teaching in the invention of Imai because Iwakiri teaches his invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25; 57-59].

Claim 11 has been analyzed and rejected w/r to claim 5 above.

For claim 12, Imai disclose the image readout apparatus. However, Imai does not disclose one of a plurality of pixel densities in the longitudinal direction of the linear electrodes is selected and the pixel density changing means changes the scanning speed of the readout light and/or the sampling rate based on the selected pixel density. Iwakiri discloses by changing the scan speed, the number of scan lines is also changed, whereby changing pixel density [col. 10, lines 63-68]. The selection of pixel density is a result of the change in scan speed. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Iwakiri's teaching in the invention of Imai because Iwakiri teaches his invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25; 57-59].

Claim 13 has been analyzed and rejected w/r to claim 10 above. Iwakiri discloses changes of scan speed and sampling rate.

Claim 14 has been analyzed and rejected w/r to claim 7 above. Iwakiri discloses with selected pixel density, beam diameter is changed accordingly.

Art Unit: 2625

**5. Claims 3-4 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai, Patent No.: US 6,376,857 B1 (hereinafter Imai) in view of Iwakiri et al., Patent No.: US 6,580,525 B1 (hereinafter Iwakiri) as applied to claims 1 and 6 above, and further in view of Agano, PG Pub. No.: US 2003/0015664 A1 (hereinafter Agano).**

For claim 3, Imai discloses the image readout apparatus. However Imai does not teach a pixel density of the image, in a direction perpendicular to the longitudinal direction of the linear electrodes, is changed by adding the electric current detected for each of the linear electrodes in an analog manner, according to the pixel density in the longitudinal direction of the linear electrodes. Iwakiri discloses a pixel density change in the direction perpendicular to the longitudinal direction [col. 10, lines 35-43; i.e. in sub-scanning direction]. Agano discloses current change in analog manner [para. 0077, 0097]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Iwakiri and Agano in the invention of Imai because both Iwakiri and Agano teaches their invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25, 57-59 (Iwakiri); para. 0021 (Agano)].

Claim 4 has been analyzed and rejected w/r to claim 3 above.



Art Unit: 2625

For claim 8, Imai discloses the image readout apparatus. However Imai and Iwakiri do not teach an image readout apparatus as defined in claim 6, further comprising: an adding means for adding the electric current detected from each of the linear electrodes in an analog manner. Agano discloses current change in analog manner [para. 0077, 0097]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Iwakiri and Agano in the invention of Imai because both Iwakiri and Agano teaches their invention to utilize an image read-out apparatus with transformed pixel density as claimed for benefit as stated [col. 2, lines 21-25, 57-59 (Iwakiri); para. 0021 (Agano)].

Claim 9 has been analyzed and rejected w/r to claim 8 above.

### ***Contact***

6. **THIS ACTION IS NON-FINAL.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELBERT TSANG whose telephone number is (571)270-3748. The examiner can normally be reached on 8:00 AM - 5:00 PM, M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark K. Zimmerman can be reached on (571) 272-7653. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ELBERT TSANG/  
Examiner, Art Unit 2625

/Mark K Zimmerman/  
Supervisory Patent Examiner, Art Unit 2625